

WHAT IS CLAIMED IS:

1. A liquid crystal display, comprising:
 - a liquid crystal panel including a plurality of gate lines, a plurality of data lines intersecting the gate lines, and a plurality of pixels provided near the intersections of the gate lines and the data lines;
 - a timing controller receiving image data and synchronization signals from an external graphics source, performing format conversion for the image data and generating control signals required for driving the liquid crystal panel;
 - a voltage generator generating gray voltages and gate voltages required for the liquid crystal panel;
 - a gate driver sequentially scanning the gate lines of the liquid crystal panel by unit of one horizontal scanning period based on the gate voltages; and
 - a data driver arranging the image data from the timing controller corresponding to the data lines of the liquid crystal panel, selecting the gray voltages corresponding to the image data, and applying the selected voltages to the pixels connected to the scanned gate lines through the data lines,
- wherein the data driver reverses the polarity of the gray voltages to be applied to the data lines of the liquid crystal panel by a predetermined number of rows, and biases the data lines to a voltage with a predetermined level before outputting the gray voltages to the pixels in each scanned row.
2. The liquid crystal display of claim 1, wherein the data driver is controlled such that a duration for applying the gray voltages to the pixels in the rows with polarity inversion is longer than a duration for applying the gray voltages to the pixels in the rows without polarity inversion.
3. The liquid crystal display of claim 1 or 2, wherein the data driver comprises a plurality of data driving ICs, each data driving IC assigned to a predetermined number of the data lines of the liquid crystal panel, and each of the data driving ICs comprises,
 - a shift register shifting the image data from the timing controller and arranging the image data corresponding to the data lines;

a digital-to-analog converter selecting analog gray voltages corresponding to the image data for the data lines;

a latch outputting the gray voltages selected by the digital-to-analog converter to the liquid crystal panel in response to a predetermined control signal;

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data line bias circuit biasing the data lines of the liquid crystal panel to the voltage with the predetermined level whenever the latch outputs the gray voltages to the liquid crystal panel.

4. The liquid crystal display of claim 3, wherein the voltage with the
10 predetermined level includes a ground voltage.

5. The liquid crystal display of claim 3, wherein the voltage with the predetermined level for positive polarity is different from the voltage with the predetermined level for negative polarity.

6. The liquid crystal display of claim 3, wherein the predetermined
15 control signal comprises a load signal controlling a timing for applying the gray voltages from the data driver to the data lines of the liquid crystal panel and a pulse timing of the load signal is determined by the timing controller.